Abstract

Shielding Gas and Arc-Welding Method

The invention relates to a shielding gas for use in the arc welding of metallic work pieces. The invention further relates to a process for the arc welding of metallic work pieces using consumable electrodes, whereby a shielding gas stream is supplied to the work piece adjacent to the electrode. According to the invention, for shielding gases recommended for use in the MSG welding, preferably the MAG welding, of rust-proof steels, especially nickel-based materials, specialty steels, or high-alloy steels,

a) if the shielding gas contains no helium, it contains nitrogen in a proportion of between 4.5 % by volume and 15 % by volume

and

b) if the shielding gas does contain helium, it contains nitrogen in a proportion of between 3 and 15 % by volume,

in addition to argon, carbon dioxide, and, if applicable, helium.